

## ANNEX C (normative)

### Ada 95 application programmer's interface

```
-- File rti.ads
with Ada.Streams;
package RTI is

-- 
-- System parameters
--

-- The following declarations are implementation specific constants and
-- capacities. They are provided as guidance to users of this RTI
-- implementation and are not part of the High Level Architecture
-- Interface Specification. Modification of these declarations will not
-- alter the performance of the RTI.

Max_Federation : constant := 32;
Max_Federate : constant := 32;
Max_Name_Length : constant := 64;
Max_Spaces : constant := 10;
Max_Object_Classes : constant := 200;
Max_Interaction_Classes : constant := 200;
Max_Attributes_Per_Class : constant := 200;
Max_Parameters_Per_Class : constant := 200;
Max_Dimensions_Per_Space : constant := 10;
Max_User_Tag_Length : constant := 30;
Rti_Version : constant String := "1.3R11";

-- 
-- DDM_Coordinate and limits
--

type DDM_Coordinate is mod implementation-defined;
DDM_Max_Coordinate : constant DDM_Coordinate;
DDM_Min_Coordinate : constant DDM_Coordinate;

-- 
-- Default space name
--

Default_Space_Name : constant String := "defaultSpace";

-- 
-- Enumeration types
--

type Object_State is (
    Known_To_Federate,
    Holding_Tokens,
    Deleted);

type Resign_Action is (
    Release_Attributes,
    Delete_Objects,
    Delete_Objects_And_Release_Attributes,
    No_Action);

type Federate_State_Type is (
```

```

    Running,
    Saving,
    Restoring);

type Time_Management_State_Type is (
    Idle,
    Time_Advancing);

--
-- Exceptions
--

Array_Index_Out_Of_Bounds,
Asynchronous_Delivery_Already_Disabled,
Asynchronous_Delivery_Already_Enabled,
Attribute_Acquisition_Was_Not_Requested,
Attribute_Acquisition_Was_Not_Canceled,
Attribute_Already_Being_Acquired,
Attribute_Already_Being_Divested,
Attribute_Already_Owned,
Attribute_Divestiture_Was_Not_Requested,
Attribute_Not_Defined,
Attribute_Not_Known,
Attribute_Not_Owned,
Attribute_Not_Published,
Concurrent_Access_Attempted,
Could_Not_Discover,
Could_Not_Open_FED,
Could_Not_Restore,
Delete_Privilege_Not_Held,
Dimension_Not_Defined,
Enable_Time_Constrained_Pending,
Enable_Time_Constrained_Was_Not_Pending,
Enable_Time_Regulation_Pending,
Enable_Time_Regulation_Was_Not_Pending,
Error_Reading_FED,
Event_Not_Known,
Federate_Already_Execution_Member,
Federate_Internal_Error,
FederateLogging_Service_Calls,
Federate_Not_Execution_Member,
Federate_Owns_Attributes,
Federate_Was_Not_Asked_To_Release_Attribute,
Federates_Currently_Joined,
Federation_Execution_Already_Exists,
Federation_Execution_Does_Not_Exist,
Federation_Time_Already_Passed,
Handle_Value_Pair_Maximum_Exceeded,
Interaction_Class_Not_Defined,
Interaction_Class_Not_Known,
Interaction_Class_Not_Published,
Interaction_Class_Not_Subscribed,
Interaction_Parameter_Not_Defined,
Interaction_Parameter_Not_Known,
Invalid_Extents,
Invalid_Federation_Time,
Invalid_Handle_Value_Pair_Set_Context,
Invalid_Lookahead,
Invalid_Ordering_Handle,
Invalid_Region_Context,
Invalid_Resign_Action,
Invalid_Retraction_Handle,
Invalid_Transportation_Handle,
Memory_Exhausted,
Name_Not_Found,
Object_Class_Not_Defined,
Object_Class_Not_Known,
Object_Class_Not_Published,
Object_Class_Not_Subscribed,
Object_Not_Known,
Object_Already_Registered,
Region_Not_Known,
Restore_In_Progress,
Restore_Not_Requested,

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RTI_Internal_Error,
Space_Not_Defined,
Save_In_Progress,
Save_Not_Initiated,
Specified_Save_Label_Does_Not_Exist,
Synchronization_Point_Label_Was_Not_Announced,
Time_Advance_Already_In_Progress,
Time_Advance_Was_Not_In_Progress,
Time_Constrained_Already_Enabled,
Time_Constrained_Was_Not_Enabled,
Time_Regulation_Already_Enabled,
Time_Regulation_Was_Not_Enabled,
Unable_To_Perform_Save,
Value_Count_Exceeded,
Value_Length_Exceeded : exception;

-- Types used across the RTI
--
-- Handles
--

type Space_Handle is private;
type Object_Class_Handle is private;
type Interaction_Class_Handle is private;
type Extent_Index is private;
type Attribute_Handle is private;
type Parameter_Handle is private;
type Object_Handle is private;
type Dimension_Handle is private;
type Federate_Handle is private;
type Transportation_Handle is private;
type Ordering_Handle is private;
type Region_Handle is private;

type Unique_Id is mod implementation-defined;

type Event_Retraction_Handle is record
    The_Serial_Number : Unique_Id;
    Sending_Federate : Federate_Handle;
end record;

-- Data Interchange Type
--

subtype Value_Bucket is Ada.Streams.Stream_Element_Array;

-- Miscellaneous Types and Declarations
--

-- Federate_Handle_Set
type Federate_Handle_Set is array (Positive range <>) of Federate_Handle;
-- Attribute_Handle_Set
type Attribute_Handle_Set is array (Positive range <>) of Attribute_Handle;
-- Region_Handle_Set
type Region_Handle_Set is array (Positive range <>) of Region_Handle;
-- Region_Handle services
-- In an implementation a Region_Handle could be invalid.
-- The function Is_Valid allows to know the validity of a Region_Handle.
-- A service invoked with an invalid Region_Handle in input raises
-- Region_Not_Known.

function Is_Valid (
    The_Region : in Region_Handle)

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return Boolean;

function Get_Range_Lower_Bound (
    The_Region : in Region_Handle;
    The_Extent : in Extent_Index;
    The_Dimension : in Dimension_Handle)
return DDM_Coordinate;

function Get_Range_Upper_Bound (
    The_Region : in Region_Handle;
    The_Extent : in Extent_Index;
    The_Dimension : in Dimension_Handle)
return DDM_Coordinate;

procedure Set_Range_Lower_Bound (
    The_Region : in Region_Handle;
    The_Extent : in Extent_Index;
    The_Dimension : in Dimension_Handle;
    The_Bound : in DDM_Coordinate);

procedure Set_Range_Upper_Bound (
    The_Region : in Region_Handle;
    The_Extent : in Extent_Index;
    The_Dimension : in Dimension_Handle;
    The_Bound : in DDM_Coordinate);

function Get_Space_Handle (
    The_Region : in Region_Handle)
return Space_Handle;

function Get_Number_Of_Extents (
    The_Region : in Region_Handle)
return Natural;

function Get_Range_Lower_Bound_Notification_Limit (
    The_Region : in Region_Handle;
    The_Extent : in Extent_Index;
    The_Dimension : in Dimension_Handle)
return DDM_Coordinate;

function Get_Range_Upper_Bound_Notification_Limit (
    The_Region : in Region_Handle;
    The_Extent : in Extent_Index;
    The_Dimension : in Dimension_Handle)
return DDM_Coordinate;

-- Parameter_Handle_Value_Pair_Set

type Parameter_Handle_Value_Pair_Set is limited private;

procedure Create (
    Set : in out Parameter_Handle_Value_Pair_Set;
    Count : in Natural);

procedure Add (
    Set : in Parameter_Handle_Value_Pair_Set;
    The_Handle : in Parameter_Handle;
    The_Value : in Value_Bucket);

function Transportation_Type_Of (
    Set : in Parameter_Handle_Value_Pair_Set)
return Transportation_Handle;

function Ordering_Type_Of (
    Set : in Parameter_Handle_Value_Pair_Set)
return Ordering_Handle;

procedure Get_Region (
    Set : in Parameter_Handle_Value_Pair_Set;
    The_Region : out Region_Handle);

function Value_Of (
    Set : in Parameter_Handle_Value_Pair_Set;
    I : in Positive)

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```

    return Value_Bucket;

    function Handle_Of (
        Set : in Parameter_Handle_Value_Pair_Set;
        I : in Positive)
    return Parameter_Handle;

    function Length_Of (
        Set : in Parameter_Handle_Value_Pair_Set)
    return Natural;

-- Attribute_Handle_Value_Pair_Set

type Attribute_Handle_Value_Pair_Set is limited private;

procedure Create (
    Set : in out Attribute_Handle_Value_Pair_Set;
    Count : in Natural);

procedure Add (
    Set : in Attribute_Handle_Value_Pair_Set;
    The_Handle : in Attribute_Handle;
    The_Value : in Value_Bucket);

function Transportation_Type_Of (
    Set : in Attribute_Handle_Value_Pair_Set;
    I : in Positive)
return Transportation_Handle;

function Ordering_Type_Of (
    Set : in Attribute_Handle_Value_Pair_Set;
    I : in Positive)
return Ordering_Handle;

procedure Get_Region (
    Set : in Attribute_Handle_Value_Pair_Set;
    I : in Positive;
    The_Region : out Region_Handle);

function Value_Of (
    Set : in Attribute_Handle_Value_Pair_Set;
    I : in Positive)
return Value_Bucket;

function Handle_Of (
    Set : in Attribute_Handle_Value_Pair_Set;
    I : in Positive)
return Attribute_Handle;

function Length_Of (
    Set : in Attribute_Handle_Value_Pair_Set)
return Natural;

-- Time types
--

-- type Fed_Time is private;
-- type Fed_Time_Delta is private;
--
-- procedure Decode (Time : in out Fed_Time; S : in Value_Bucket);
-- function Encode (Time : in Fed_Time) return Value_Bucket;
-- function Image (Time : in Fed_Time) return String;
-- procedure Set_To_Zero (Time : in out Fed_Time);
-- procedure Set_To_Epsilon (Time : in out Fed_Time);
--
-- function ">" (L, R : Fed_Time) return Boolean;
-- function "<" (L, R : Fed_Time) return Boolean;
-- function ">=" (L, R : Fed_Time) return Boolean;
-- function "<=" (L, R : Fed_Time) return Boolean;
-- function "=" (L, R : Fed_Time) return Boolean;
--
-- procedure Decode (Time : in out Fed_Time_Delta; S : in Value_Bucket);
-- function Encode (Time : in Fed_Time_Delta) return Value_Bucket;

```

```

-- function Image (Time : in Fed_Time_Delta) return String;
-- procedure Set_To_Zero (Time : in out Fed_Time_Delta);
-- procedure Set_To_Epsilon (Time : in out Fed_Time_Delta);
--
-- function ">" (L, R : Fed_Time_Delta) return Boolean;
-- function "<" (L, R : Fed_Time_Delta) return Boolean;
-- function ">=" (L, R : Fed_Time_Delta) return Boolean;
-- function "<=" (L, R : Fed_Time_Delta) return Boolean;
-- function "=" (L, R : Fed_Time_Delta) return Boolean;
--
-- procedure Sub (To : in out Fed_Time; Value : in Fed_Time_Delta);
-- procedure Add (To : in out Fed_Time; Value : in Fed_Time_Delta);
-- procedure Delta_From_To (
--     From : in Fed_Time;
--     To : in Fed_Time;
--     Result : in out Fed_Time_Delta);
--
-- temporary

type Fed_Time is private;
type Fed_Time_Delta is private;
Fed_Time_Zero : constant Fed_Time;
Fed_Time_Delta_Zero : constant Fed_Time_Delta;
Epsilon : constant Fed_Time_Delta;

function ">" (L, R : Fed_Time) return Boolean;
function "<" (L, R : Fed_Time) return Boolean;
function ">=" (L, R : Fed_Time) return Boolean;
function "<=" (L, R : Fed_Time) return Boolean;

function ">" (L, R : Fed_Time_Delta) return Boolean;
function "<" (L, R : Fed_Time_Delta) return Boolean;
function ">=" (L, R : Fed_Time_Delta) return Boolean;
function "<=" (L, R : Fed_Time_Delta) return Boolean;

function "--" (L, R : Fed_Time) return Fed_Time_Delta;
function "--" (L : Fed_Time; R : Fed_Time_Delta) return Fed_Time;
function "--" (L, R : Fed_Time_Delta) return Fed_Time_Delta;
function "+" (L : Fed_Time_Delta; R : Fed_Time) return Fed_Time;
function "+" (L : Fed_Time; R : Fed_Time_Delta) return Fed_Time;
function "+" (L, R : Fed_Time_Delta) return Fed_Time_Delta;
function "--" (X : Fed_Time_Delta) return Fed_Time_Delta;

function "*" (L : Fed_Time_Delta; R : Long_Float) return Fed_Time_Delta;
function "*" (L : Fed_Time_Delta; R : Integer) return Fed_Time_Delta;
function "/" (L : Fed_Time_Delta; R : Long_Float) return Fed_Time_Delta;
function "/" (L : Fed_Time_Delta; R : Integer) return Fed_Time_Delta;

function To_Seconds (X : Fed_Time_Delta) return Long_Float;
function Seconds_To_Fed_Time_Delta (X : Long_Float) return Fed_Time_Delta;

function Image (
    X : Fed_Time;
    Unit : Long_Float := 1.0;
    Aft : Natural := 0)
return String;

function Image (
    X : Fed_Time_Delta;
    Unit : Long_Float := 1.0;
    Aft : Natural := 0)
return String;

-- end temporary

private
    ... -- Implementation specific

end RTI;
%%%
-- File rti-rti_ambassador.ads

with RTI.Federate_Ambassador;

```

```

package RTI.Rti_Ambassador is

    type Rti_Ambassador is limited private;

    procedure Create (The_Rti_Ambassador : in out Rti_Ambassador);
    procedure Destroy (The_Rti_Ambassador : in out Rti_Ambassador);

    --
    -- Provides the Federation Management services (4.x services) initiated
    -- by federates.
    --

    -- 4.2
    procedure Create_Federation_Execution (
        The_Rti_Ambassador : in Rti_Ambassador;
        Execution_Name : in String;
        Fed : in String);

    -- 4.3
    procedure Destroy_Federation_Execution (
        The_Rti_Ambassador : in Rti_Ambassador;
        Execution_Name : in String);

    -- 4.4
    function Join_Federation_Execution (
        The_Rti_Ambassador : in Rti_Ambassador;
        Your_Name : in String;
        Execution_Name : in String;
        Federate_Ambassador : in RTI.Federate_Ambassador.Federate_Ambassador)
        return Federate_Handle;

    -- 4.5
    procedure Resign_Federation_Execution (
        The_Rti_Ambassador : in Rti_Ambassador;
        The_Action : in Resign_Action);

    -- 4.6
    procedure Register_Federation_Synchronization_Point (
        The_Rti_Ambassador : in Rti_Ambassador;
        Label : in String;
        The_Tag : in String);

    procedure Register_Federation_Synchronization_Point (
        The_Rti_Ambassador : in Rti_Ambassador;
        Label : in String;
        The_Tag : in String;
        Sync_Set : in Federate_Handle_Set);

    -- 4.9
    procedure Synchronization_Point_Achieved (
        The_Rti_Ambassador : in Rti_Ambassador;
        Label : in String);

    -- 4.11
    procedure Request_Federation_Save (
        The_Rti_Ambassador : in Rti_Ambassador;
        Label : in String;
        The_Time : in Fed_Time);

    procedure Request_Federation_Save (
        The_Rti_Ambassador : in Rti_Ambassador;
        Label : in String);

    -- 4.13
    procedure Federate_Save_Begun (
        The_Rti_Ambassador : in Rti_Ambassador);

    -- 4.14
    procedure Federate_Save_Complete (
        The_Rti_Ambassador : in Rti_Ambassador);

    procedure Federate_Save_Not_Complete (
        The_Rti_Ambassador : in Rti_Ambassador);

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-- 4.16
procedure Request_Federation_Restore (
    The_Rti_Ambassador : in Rti_Ambassador;
    Label : in String);

-- 4.20
procedure Federate_Restore_Complete (
    The_Rti_Ambassador : in Rti_Ambassador);

procedure Federate_Restore_Not_Complete (
    The_Rti_Ambassador : in Rti_Ambassador);

-- Provides the Declaration Management services (5.x services) initiated
-- by federates.
--

-- 5.2
procedure Publish_Object_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Attributes : in Attribute_Handle_Set);

-- 5.3
procedure Unpublish_Object_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle);

-- 5.4
procedure Publish_Interaction_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction : in Interaction_Class_Handle);

-- 5.5
procedure Unpublish_Interaction_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction : in Interaction_Class_Handle);

-- 5.6
procedure Subscribe_Object_Class_Attributes (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Attributes : in Attribute_Handle_Set;
    Active : in Boolean := True);

-- 5.7
procedure Unsubscribe_Object_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle);

-- 5.8
procedure Subscribe_Interaction_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Interaction_Class_Handle;
    Active : in Boolean := True);

-- 5.9
procedure Unsubscribe_Interaction_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Interaction_Class_Handle);

-- Provides the object management services (6.x services) initiated
-- by federates.
--

-- 6.2
function Register_Object_Instance (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Object : in String)
return Object_Handle;

```

```

function Register_Object_Instance (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle)
return Object_Handle;

-- 6.4
-- The argument The_Attributes_And_Values is deallocated by this procedure
procedure Update_Attribute_Values (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes_And_Values : in out Attribute_Handle_Value_Pair_Set;
    The_Time : in Fed_Time;
    The_Tag : in String;
    The_Handle : out Event_Retraction_Handle);

-- The argument The_Attributes_And_Values is deallocated by this procedure
procedure Update_Attribute_Values (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes_And_Values : in out Attribute_Handle_Value_Pair_Set;
    The_Tag : in String);

-- 6.6
-- The argument The_Parameters_And_Values is deallocated by this procedure
procedure Send_Interaction (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction : in Interaction_Class_Handle;
    The_Parameters_And_Values : in out Parameter_Handle_Value_Pair_Set;
    The_Time : in Fed_Time;
    The_Tag : in String;
    The_Handle : out Event_Retraction_Handle);

-- The argument The_Parameters_And_Values is deallocated by this procedure
procedure Send_Interaction (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction : in Interaction_Class_Handle;
    The_Parameters_And_Values : in out Parameter_Handle_Value_Pair_Set;
    The_Tag : in String);

-- 6.8
function Delete_Object_Instance (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Time : in Fed_Time;
    The_Tag : in String)
return Event_Retraction_Handle;

procedure Delete_Object_Instance (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Tag : in String);

-- 6.10
procedure Local_Delete_Object_Instance (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle);

-- 6.11
procedure Change_Attribute_Transportation_Type (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Type : in Transportation_Handle);

-- 6.12
procedure Change_Interaction_Transportation_Type (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction_Class : in Interaction_Class_Handle;
    The_Type : in Transportation_Handle);

-- 6.15
procedure Request_Attribute_Value_Update (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle);

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The_Attributes : in Attribute_Handle_Set);

procedure Request_Class_Attribute_Value_Update (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Attributes : in Attribute_Handle_Set);

<-- 
-- Provides the Ownership Management services (7.x services) initiated
-- by federates.
--

-- 7.2
procedure Unconditional_Attribute_Ownership_Divestiture (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set);

-- 7.3
procedure Negotiated_Attribute_Ownership_Divestiture (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Tag : in String);

-- 7.7
procedure Attribute_Ownership_Acquisition (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Tag : in String);

-- 7.8
procedure Attribute_Ownership_Acquisition_If_Available (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    Desired_Attributes : in Attribute_Handle_Set);

-- 7.11
function Attribute_Ownership_Release_Response (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set)
return Attribute_Handle_Set;

-- 7.12
procedure Cancel_Negotiated_Attribute_Ownership_Divestiture (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set);

-- 7.13
procedure Cancel_Attribute_Ownership_Acquisition (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set);

-- 7.15
procedure Query_Attribute_Ownership (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attribute : in Attribute_Handle);

-- 7.17
function Is_Attribute_Owned_By_Federate (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attribute : in Attribute_Handle)
return Boolean;

<-- 
-- Provides the Time Management services (8.x services) initiated
-- by federates.
--

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```

-- 8.2
procedure Enable_Time_Regulation (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in Fed_Time;
    The_Lookahead : in Fed_Time_Delta);

-- 8.4
procedure Disable_Time_Regulation (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 8.5
procedure Enable_Time_Constrained (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 8.7
procedure Disable_Time_Constrained (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 8.8
procedure Time_Advance_Request (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in Fed_Time);

-- 8.9
procedure Time_Advance_Request_Available (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in Fed_Time);

-- 8.10
procedure Next_Event_Request (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in Fed_Time);

-- 8.11
procedure Next_Event_Request_Available (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in Fed_Time);

-- 8.12
procedure Flush_Queue_Request (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in Fed_Time);

-- 8.14
procedure Enable_Asynchronous_Delivery (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 8.15
procedure Disable_Asynchronous_Delivery (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 8.16
procedure Query_Lbts (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in out Fed_Time);

-- 8.17
procedure Query_Federate_Time (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in out Fed_Time);

-- 8.18
procedure Query_Min_Next_Event_Time (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Time : in out Fed_Time);

-- 8.19
procedure Modify_Lookahead (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Lookahead : in Fed_Time_Delta);

-- 8.20
procedure Query_Lookahead (

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```

The_Rti_Ambassador : in Rti_Ambassador;
The_Lookahead : in out Fed_Time_Delta);

-- 8.21
procedure Retract (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Event_Retraction_Handle);

-- 8.23
procedure Change_Attribute_Order_Type (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Type : in Ordering_Handle);

-- 8.24
procedure Change_Interaction_Order_Type (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Interaction_Class_Handle;
    The_Type : in Ordering_Handle);

--
-- Provides the Data Distribution Management services (9.x services) initiated
-- by federates.
--

-- 9.2
function Create_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Space : in Space_Handle;
    Number_Of_Extents : in Natural)
return Region_Handle;

-- 9.3
procedure Notify_About_Region_Modification (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Region : in Region_Handle);

-- 9.4
procedure Delete_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Region : in Region_Handle);

-- 9.5
function Register_Object_Instance_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Object : in String;
    The_Attributes : in Attribute_Handle_Set;
    The_Regions : in Region_Handle_Set)
return Object_Handle;

function Register_Object_Instance_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Regions : in Region_Handle_Set)
return Object_Handle;

-- 9.6
procedure Associate_Region_For_Updates (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Regions : in Region_Handle_Set);

-- 9.7
procedure Unassociate_Region_For_Updates (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Region : in Region_Handle;
    The_Object : in Object_Handle);

-- 9.8
procedure Subscribe_Object_Class_Attributes_With_Region (

```

```

The_Rti_Ambassador : in Rti_Ambassador;
The_Class : in Object_Class_Handle;
The_Regions : in Region_Handle_Set;
The_Attributes : in Attribute_Handle_Set;
Active : in Boolean := True);

-- 9.9
procedure Unsubscribe_Object_Class_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Region : in Region_Handle);

-- 9.10
procedure Subscribe_Interaction_Class_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Interaction_Class_Handle;
    The_Region : in Region_Handle;
    Active : in Boolean := True);

-- 9.11
procedure Unsubscribe_Interaction_Class_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Interaction_Class_Handle;
    The_Region : in Region_Handle);

-- 9.12
-- The argument The_Parameters is deallocated by this procedure
procedure Send_Interaction_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction : in Interaction_Class_Handle;
    The_Parameters : in out Parameter_Handle_Value_Pair_Set;
    The_Time : in Fed_Time;
    The_Tag : in String;
    The_Region : in Region_Handle;
    The_Handle : out Event_Retraction_Handle);

-- The argument The_Parameters is deallocated by this procedure
procedure Send_Interaction_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Interaction : in Interaction_Class_Handle;
    The_Parameters : in out Parameter_Handle_Value_Pair_Set;
    The_Tag : in String;
    The_Region : in Region_Handle);

-- 9.13
procedure Request_Class_Attribute_Value_Update_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Class : in Object_Class_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Regions : in Region_Handle_Set);

procedure Request_Object_Attribute_Value_Update_With_Region (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set;
    The_Regions : in Region_Handle_Set);

-- 
-- Provides the RTI Support services (10.x services) initiated
-- by federates.
--

-- 10.2
function Get_Object_Class_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String)
return Object_Class_Handle;

-- 10.3
function Get_Object_Class_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Object_Class_Handle)
return String;

```

```

-- 10.4
function Get_Attribute_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String;
    Which_Class : in Object_Class_Handle)
return Attribute_Handle;

-- 10.5
function Get_Attribute_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Attribute_Handle;
    Which_Class : in Object_Class_Handle)
return String;

-- 10.6
function Get_Interaction_Class_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String)
return Interaction_Class_Handle;

-- 10.7
function Get_Interaction_Class_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Interaction_Class_Handle)
return String;

-- 10.8
function Get_Parameter_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String;
    Which_Class : in Interaction_Class_Handle)
return Parameter_Handle;

-- 10.9
function Get_Parameter_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Parameter_Handle;
    Which_Class : in Interaction_Class_Handle)
return String;

-- 10.10
function Get_Object_Instance_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String)
return Object_Handle;

-- 10.11
function Get_Object_Instance_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Object_Handle)
return String;

-- 10.12
function Get_Routing_Space_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String)
return Space_Handle;

-- 10.13
function Get_Routing_Space_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Space_Handle)
return String;

-- 10.14
function Get_Dimension_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String;
    Which_Space : in Space_Handle)
return Dimension_Handle;

-- 10.15
function Get_Dimension_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Dimension_Handle)
return String;

```

```

The_Handle : in Dimension_Handle;
Which_Space : in Space_Handle)
return String;

-- 10.16
function Get_Attribute_Routing_Space_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Attribute_Handle;
    Which_Class : in Interaction_Class_Handle)
return Space_Handle;

-- 10.17
function Get_Object_Class (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Object : in Object_Handle)
return Object_Class_Handle;

-- 10.18
function Get_Interaction_Routing_Space_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Interaction_Class_Handle)
return Space_Handle;

-- 10.19
function Get_Transportation_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String)
return Transportation_Handle;

-- 10.20
function Get_Transportation_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Transportation_Handle)
return String;

-- 10.21
function Get_Ordering_Handle (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Name : in String)
return Ordering_Handle;

-- 10.22
function Get_Ordering_Name (
    The_Rti_Ambassador : in Rti_Ambassador;
    The_Handle : in Ordering_Handle)
return String;

-- 10.23
procedure Enable_Class_Relevance_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 10.24
procedure Disable_Class_Relevance_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 10.25
procedure Enable_Attribute_Relevance_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 10.26
procedure Disable_Attribute_Relevance_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 10.27
procedure Enable_Attribute_Scope_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 10.28
procedure Disable_Attribute_Scope_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- 10.29
procedure Enable_Interaction_Relevance_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

```

```

-- 10.30
procedure Disable_Interaction_Relevance_Advisory_Switch (
    The_Rti_Ambassador : in Rti_Ambassador);

-- Implementation specific
function Tick (
    The_Rti_Ambassador : in Rti_Ambassador)
return Boolean;

type Tick_Time_Delta is digits implementation-defined;

function Tick (
    The_Rti_Ambassador : in Rti_Ambassador;
    Minimum : in Tick_Time_Delta;
    Maximum : in Tick_Time_Delta)
return Boolean;

private
    ... -- Implementation specific
end RTI.Rti_Ambassador;
%%%
-- File rti-federate_ambassador.ads

package RTI.Federate_Ambassador is

    type Federate_Ambassador is limited private;

    --
    -- Provides the Federation Management services (4.x services) initiated
    -- by the RTI.
    --

    -- 4.7
    type Synchronization_Point_Registration_Succeeded_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador;
        Label : in String);

    type Synchronization_Point_Registration_Failed_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador;
        Label : in String);

    -- 4.8
    type Announce_Synchronization_Point_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador;
        Label : in String;
        Tag : in String);

    -- 4.10
    type Federation_Synchronized_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador;
        Label : in String);

    -- 4.12
    type Initiate_Federate_Save_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador;
        Label : in String);

    -- 4.15
    type Federation_Saved_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador);

    type Federation_Not_Saved_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador);

    -- 4.17
    type Request_Federation_Restore_Succeeded_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador;
        Label : in String);

    type Request_Federation_Restore_Failed_Cb is access procedure (
        The_Federate_Ambassador : in Federate_Ambassador);

```

```

Label : in String;
Reason : in String);

-- 4.18
type Federation_Restore_Begun_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador);

-- 4.19
type Initiate_Federate_Restore_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    Label : in String;
    Handle : in Federate_Handle);

-- 4.21
type Federation_Restored_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador);

type Federation_Not_Restored_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador);

--

-- Provides the Declaration Management services (5.x services) initiated
-- by the RTI.
--

-- 5.10
type Start_Registration_For_Object_Class_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Class : in Object_Class_Handle);

-- 5.11
type Stop_Registration_For_Object_Class_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Class : in Object_Class_Handle);

-- 5.12
type Turn_Interactions_On_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Handle : in Interaction_Class_Handle);

-- 5.13
type Turn_Interactions_Off_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Handle : in Interaction_Class_Handle);

--

-- Provides the Object Management services (6.x services) initiated
-- by the RTI.
--

-- 6.3
type Discover_Object_Instance_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Object_Class : in Object_Class_Handle);

-- 6.5
type Reflect_Attribute_Values_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Value_Pair_Set;
    The_Time : in Fed_Time;
    The_Tag : in String;
    The_Handle : in Event_Retraction_Handle);

type Reflect_Attribute_Values_1_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Value_Pair_Set;
    The_Tag : in String);

-- 6.7
type Receive_Interaction_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;

```

```

The_Interaction_Class : in Interaction_Class_Handle;
The_Parameters : in Parameter_Handle_Value_Pair_Set;
The_Time : in Fed_Time;
The_Tag : in String;
The_Handle : in Event_Retraction_Handle);

type Receive_Interaction_1_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Interaction_Class : in Interaction_Class_Handle;
  The_Parameters : in Parameter_Handle_Value_Pair_Set;
  The_Tag : in String);

-- 6.9
type Remove_Object_Instance_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Time : in Fed_Time;
  The_Tag : in String;
  The_Handle : in Event_Retraction_Handle);

type Remove_Object_Instance_1_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Tag : in String);

-- 6.13
type Attributes_In_Scope_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Attributes : in Attribute_Handle_Set);

-- 6.14
type Attributes_Out_Of_Scope_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Attributes : in Attribute_Handle_Set);

-- 6.16
type Provide_Attribute_Value_Update_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Attributes : in Attribute_Handle_Set);

-- 6.17
type Turn_Updates_On_For_Object_Instance_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Attributes : in Attribute_Handle_Set);

-- 6.18
type Turn_Updates_Off_For_Object_Instance_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  The_Attributes : in Attribute_Handle_Set);

-- 
-- Provides the Ownership Management services (7.x services) initiated
-- by the RTI.
-- 

-- 7.4
type Request_Attribute_Ownership_Assumption_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  Offered_Attributes : in Attribute_Handle_Set;
  The_Tag : in String);

-- 7.5
type Attribute_Ownership_Divestiture_Notification_Cb is access procedure (
  The_Federate_Ambassador : in Federate_Ambassador;
  The_Object : in Object_Handle;
  Released_Attributes : in Attribute_Handle_Set);

-- 7.6

```

```

type Attribute_Ownership_Acquisition_Notification_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    Acquired_Attributes : in Attribute_Handle_Set);

-- 7.9
type Attribute_Ownership_Unavailable_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set);

-- 7.10
type Request_Attribute_Ownership_Release_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    Requested_Attributes : in Attribute_Handle_Set;
    The_Tag : in String);

-- 7.14
type Confirm_Attribute_Ownership_Acquisition_Cancellation_Cb
is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attributes : in Attribute_Handle_Set);

-- 7.16
type Inform_Attribute_Ownership_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attribute : in Attribute_Handle;
    The_Owner : in Federate_Handle);

type Attribute_Is_Not_Owned_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attribute : in Attribute_Handle);

type Attribute_Owned_By_RTI_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Object : in Object_Handle;
    The_Attribute : in Attribute_Handle);

-- 
-- Provides the Time Management services (8.x services) initiated
-- by the RTI.
--

-- 8.3
type Time_Regulation_Enabled_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Federate_Time : in Fed_Time);

-- 8.6
type Time_Constrained_Enabled_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Federate_Time : in Fed_Time);

-- 8.13
type Time_Advance_Grant_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Time : in Fed_Time);

-- 8.22
type Request_Retraction_Cb is access procedure (
    The_Federate_Ambassador : in Federate_Ambassador;
    The_Handle : in Event_Retraction_Handle);

-- 
-- Federate_Ambassador creation / destruction
--

procedure Create (
    The_Federate_Ambassador : in out Federate_Ambassador;

```

```

Synchronization_Point_Registration_Succeeded
  : in Synchronization_Point_Registration_Succeeded_Cb := null;
Synchronization_Point_Registration_Failed
  : in Synchronization_Point_Registration_Failed_Cb := null;
Announce_Synchronization_Point
  : in Announce_Synchronization_Point_Cb := null;
Federation_Synchronized
  : in Federation_Synchronized_Cb := null;
Initiate_Federate_Save
  : in Initiate_Federate_Save_Cb := null;
Federation_Saved
  : in Federation_Saved_Cb := null;
Federation_Not_Saved
  : in Federation_Not_Saved_Cb := null;
Request_Federation_Restore_Succeeded
  : in Request_Federation_Restore_Succeeded_Cb := null;
Request_Federation_Restore_Failed
  : in Request_Federation_Restore_Failed_Cb := null;
Federation_Restore_Begun
  : in Federation_Restore_Begun_Cb := null;
Initiate_Federate_Restore
  : in Initiate_Federate_Restore_Cb := null;
Federation_Restored
  : in Federation_Restored_Cb := null;
Federation_Not_Restored
  : in Federation_Not_Restored_Cb := null;
Start_Registration_For_Object_Class
  : in Start_Registration_For_Object_Class_Cb := null;
Stop_Registration_For_Object_Class
  : in Stop_Registration_For_Object_Class_Cb := null;
Turn_Interactions_On
  : in Turn_Interactions_On_Cb := null;
Turn_Interactions_Off
  : in Turn_Interactions_Off_Cb := null;
Discover_Object_Instance
  : in Discover_Object_Instance_Cb := null;
Reflect_Attribute_Values
  : in Reflect_Attribute_Values_Cb := null;
Reflect_Attribute_Values_1
  : in Reflect_Attribute_Values_1_Cb := null;
Receive_Interaction
  : in Receive_Interaction_Cb := null;
Receive_Interaction_1
  : in Receive_Interaction_1_Cb := null;
Remove_Object_Instance
  : in Remove_Object_Instance_Cb := null;
Remove_Object_Instance_1
  : in Remove_Object_Instance_1_Cb := null;
Attributes_In_Scope
  : in Attributes_In_Scope_Cb := null;
Attributes_Out_Of_Scope
  : in Attributes_Out_Of_Scope_Cb := null;
Provide_Attribute_Value_Update
  : in Provide_Attribute_Value_Update_Cb := null;
Turn_Updates_On_For_Object_Instance
  : in Turn_Updates_On_For_Object_Instance_Cb := null;
Turn_Updates_Off_For_Object_Instance
  : in Turn_Updates_Off_For_Object_Instance_Cb := null;
Request_Attribute_Ownership_Assumption
  : in Request_Attribute_Ownership_Assumption_Cb := null;
Attribute_Ownership_Divestiture_Notification
  : in Attribute_Ownership_Divestiture_Notification_Cb := null;
Attribute_Ownership_Acquisition_Notification
  : in Attribute_Ownership_Acquisition_Notification_Cb := null;
Attribute_Ownership_Unavailable
  : in Attribute_Ownership_Unavailable_Cb := null;
Request_Attribute_Ownership_Release
  : in Request_Attribute_Ownership_Release_Cb := null;
Confirm_Attribute_Ownership_Acquisition_Cancellation
  : in Confirm_Attribute_Ownership_Acquisition_Cancellation_Cb := null;
Inform_Attribute_Ownership
  : in Inform_Attribute_Ownership_Cb := null;
Attribute_Is_Not_Owned
  : in Attribute_Is_Not_Owned_Cb := null;

```

```

Attribute_Owned_By_RTI
  : in Attribute_Owned_By_RTI_Cb := null;
Time_Regulation_Enabled
  : in Time_Regulation_Enabled_Cb := null;
Time_Constrained_Enabled
  : in Time_Constrained_Enabled_Cb := null;
Time_Advance_Grant
  : in Time_Advance_Grant_Cb := null;
Request_Retraction
  : in Request_Retraction_Cb := null
);

procedure Destroy (The_Federate_Ambassador : in out Federate_Ambassador);

-- This set of procedures provides an other way to register callbacks.

procedure Register_Synchronization_Point_Registration_Succeeded (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Synchronization_Point_Registration_Succeeded_Cb);
--
procedure Register_Synchronization_Point_Registration_Failed (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Synchronization_Point_Registration_Failed_Cb);
--
procedure Register_Announce_Synchronization_Point (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Announce_Synchronization_Point_Cb);
--
procedure Register_Federation_Synchronized (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Federation_Synchronized_Cb);
--
procedure Register_Initiate_Federate_Save (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Initiate_Federate_Save_Cb);
--
procedure Register_Federation_Saved (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Federation_Saved_Cb);
--
procedure Register_Federation_Not_Saved (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Federation_Not_Saved_Cb);
--
procedure Register_Request_Federation_Restore_Succeeded (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Request_Federation_Restore_Succeeded_Cb);
--
procedure Register_Request_Federation_Restore_Failed (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Request_Federation_Restore_Failed_Cb);
--
procedure Register_Federation_Restore_Begun (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Federation_Restore_Begun_Cb);
--
procedure Register_Initiate_Federate_Restore (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Initiate_Federate_Restore_Cb);
--
procedure Register_Federation_Restored (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Federation_Restored_Cb);
--
procedure Register_Federation_Not_Restored (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Federation_Not_Restored_Cb);
--
procedure Register_Start_Registration_For_Object_Class (
  The_Federate_Ambassador : in Federate_Ambassador;
  Cb : in Start_Registration_For_Object_Class_Cb);
--

```

```

procedure Register_Stop_Registration_For_Object_Class (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Stop_Registration_For_Object_Class_Cb);
--
procedure Register_Turn_Interactions_On (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Turn_Interactions_On_Cb);
--
procedure Register_Turn_Interactions_Off (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Turn_Interactions_Off_Cb);
--
procedure Register_Discover_Object_Instance (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Discover_Object_Instance_Cb);
--
procedure Register_Reflect_Attribute_Values (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Reflect_Attribute_Values_Cb);
--
procedure Register_Reflect_Attribute_Values_1 (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Reflect_Attribute_Values_1_Cb);
--
procedure Register_Receive_Interaction (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Receive_Interaction_Cb);
--
procedure Register_Receive_Interaction_1 (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Receive_Interaction_1_Cb);
--
procedure Register_Remove_Object_Instance (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Remove_Object_Instance_Cb);
--
procedure Register_Remove_Object_Instance_1 (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Remove_Object_Instance_1_Cb);
--
procedure Register_Attributes_In_Scope (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attributes_In_Scope_Cb);
--
procedure Register_Attributes_Out_Of_Scope (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attributes_Out_Of_Scope_Cb);
--
procedure Register_Provide_Attribute_Value_Update (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Provide_Attribute_Value_Update_Cb);
--
procedure Register_Turn_Updates_On_For_Object_Instance (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Turn_Updates_On_For_Object_Instance_Cb);
--
procedure Register_Turn_Updates_Off_For_Object_Instance (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Turn_Updates_Off_For_Object_Instance_Cb);
--
procedure Register_Request_Attribute_Ownership_Assumption (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Request_Attribute_Ownership_Assumption_Cb);
--
procedure Register_Attribute_Ownership_Divestiture_Notification (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attribute_Ownership_Divestiture_Notification_Cb);
--
procedure Register_Attribute_Ownership_Acquisition_Notification (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attribute_Ownership_Acquisition_Notification_Cb);
--
procedure Register_Attribute_Ownership_Unavailable (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attribute_Ownership_Unavailable_Cb);

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        Cb : in Attribute_Ownership_Unavailable_Cb);
-- procedure Register_Request_Attribute_Ownership_Release (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Request_Attribute_Ownership_Release_Cb);
-- procedure Register_Confirm_Attribute_Ownership_Acquisition_Cancellation (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Confirm_Attribute_Ownership_Acquisition_Cancellation_Cb);
-- procedure Register_Inform_Attribute_Ownership (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Inform_Attribute_Ownership_Cb);
-- procedure Register_Attribute_Is_Not_Owned (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attribute_Is_Not_Owned_Cb);
-- procedure Register_Attribute_Owned_By_RTI (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Attribute_Owned_By_RTI_Cb);
-- procedure Register_Time_Regulation_Enabled (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Time_Regulation_Enabled_Cb);
-- procedure Register_Time_Constrained_Enabled (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Time_Constrained_Enabled_Cb);
-- procedure Register_Time_Advance_Grant (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Time_Advance_Grant_Cb);
-- procedure Register_Request_Retraction (
    The_Federate_Ambassador : in Federate_Ambassador;
    Cb : in Request_Retraction_Cb);

private
    ... -- Implementation specific
end RTI.Federate_Ambassador;

```

